

ABSTRACT OF THE DISCLOSURE

An inflator device that includes a diffuser chamber with a first combustion chamber and a second combustion chamber each connected to the diffuser chamber. A supply of a first gas-generating pyrotechnic material having a burn rate that is pressure dependent is contained within the first combustion chamber. The first combustion chamber forms or includes an orifice providing independent fluidic communication between the first combustion chamber and the diffuser chamber. This orifice throttles a single stage combustion wherein the supply of the first gas-generating pyrotechnic material is selectively reactable to produce a first combustion chamber single stage combustion product gas. A supply of a second gas-generating pyrotechnic material is contained within the second combustion chamber. The second combustion chamber forms or includes an orifice that provides independent fluidic communication between the second combustion chamber and the diffuser chamber. This orifice throttles a single stage combustion wherein the supply of the second gas-generating pyrotechnic material is selectively reactable to produce a second combustion chamber single stage combustion product gas. The diffuser chamber forms or includes at least one exit orifice. This diffuser exit orifice throttles a dual stage combustion wherein the supply of the first gas-generating pyrotechnic material is reactable to produce a first combustion chamber dual stage combustion product gas and the supply of the second gas-generating pyrotechnic material is reactable to produce a second combustion chamber dual stage combustion product gas.